Sea-Floor Spreading/Plate Tectonics Quiz CP
Part I Multiple Choice Questions

1. The material that makes up the earth's surface plates is called
   a. asthenosphere
   b. mesosphere
   c. thermosphere
   d. lithosphere

2. The **person** to describe the hypothesis of continental drift in 1911 was
   a. Alfred Wegener
   b. Harry Hess
   c. Rich Richter
   d. Donald Dewey

3. **Evidence** for the past connection of landmasses, known as the super-continent Pangea, includes…
   a. identical fossil reptiles and plants
   b. similar history of climates
   c. similar history of continental glaciation
   d. all of the above
   e. none of the above

4. New ocean floor is **created**…
   a. at convergent boundaries
   b. at divergent boundaries
   c. at transform faults
   d. in subduction zones

5. Forces at a **transform** boundary are dominantly…
   a. tensional (pulling apart)
   b. shear (sliding past one another)
   c. compressional (pushing together)

6. Forces at a **divergent** boundary are dominantly…
   a. tensional (pulling apart)
   b. shear (sliding past one another)
   c. compressional (pushing together)

7. Forces at a **convergent** boundary are dominantly
   a. tensional (pulling apart)
   b. shear (sliding past one another)
   c. compressional (pushing together)

8. The **process** in which an oceanic plate slides beneath a continental plate or another oceanic plate is known as
   a. exfoliation
   b. degradation
   c. tectonism
   d. subduction

9. What happens at **divergent plate** boundaries?
   a. destruction of old ocean floor
   b. tsunamis
   c. creation of new ocean floor
   d. all of above

10. Crust is _____ at **transform** plate boundaries.
   a. created
   b. destroyed
   c. conserved (maintained)

11. Crust is _____ at **convergent** plate boundaries.
   d. created
   e. destroyed
   f. conserved

12. At **transform boundaries** movement between the plates is
   a. towards one another
   b. away from one another
   c. horizontal, with plates moving past one another

13. In a chain of oceanic volcanic islands, like the Hawaiian that increase in age away from the site of active volcanism, the active volcanism is assumed to occur above
   a. a subduction zone
   b. a transform boundary
   c. a mid-ocean ridge
   d. a plume of molten rock called a hot spot

14. When two continental plates collide
   a. mountain building occurs
   b. sea-floor spreading occurs
   c. volcanoes form
   d. all of the above

15. The San Andreas fault zone in California is an example of _____ plate boundary
   a. divergent
   b. transform
   c. convergent

16. Earth maintains a relative hot interior mainly due to…
   a. gravitational forces from the Sun and Moon constantly stretching and squeezing the planet
   b. meteor impacts which release their kinetic energy in the form of heat
   c. residual (left over) heat and radioactive decay in the Earth's core
   d. the influence of the magnetic field of Earth created by the planet's core

17. Where does volcanic activity tend to occur on Earth?
   a. near or on tectonic plate boundaries
   b. near the middle of continents
   c. over divergent plate boundaries
   d. near the geographic north and south pole

18. Place the layers of the Earth in proper order from the center going out, and using the number 1 for mantle, 2 for inner core, 3 for crust, and 4 for outer core…
   a. 2, 1, 3, 4
   b. 3, 1, 4, 2
   c. 2, 4, 1, 3

19. Volcanic activity encircling most of the Pacific Ocean is in a belt called…
   a. the Ring of Fire
   b. the San Andreas fault
   c. the East Pacific Rise
   d. the Hawaiian hot spot

20. The Andes Mountains are created as the Nazca tectonic plate subducts beneath the South American tectonic plate. This is an example of…
   a. transform boundary
   b. divergent boundary
   c. convergent boundary
   d. intraplate volcanism

21. Is Quakertown in the Northern or Southern hemisphere?
   a. West
   b. North
   c. East
   d. South

22. Is Quakertown in the Eastern or Western hemisphere?
   a. West
   b. North
   c. East
   d. South

23. Quakertown has little chance for volcanic activity in the future because it…
   a. is near the ocean
   b. has a high elevation
   c. is not on a plate boundary
   d. has a cool climate

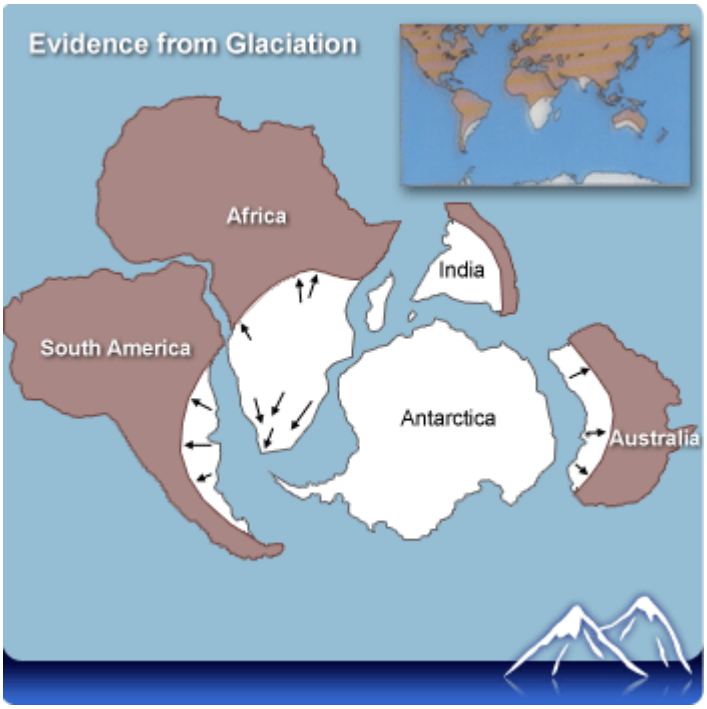
24. Which of the following is **NOT** evidence for sea-floor spreading?
   a. records of magnetic reversals contained in newly formed oceanic crust
   b. continents appear to fit together like jigsaw pieces
   c. rock samples obtained by drilling into the ocean crust and tested for age
   d. observation of volcanic activity at mid-ocean ridges (pillow lava)

25. Tectonic plate movement amounts to _____ on average.
   a. 5 miles per year
   b. 50 feet per year
   c. 5 centimeters per year
   d. 500 meters per year

26. The formation of the Hawaiian Islands is **NOT** related to…

a. sea-floor spreading
b. areas of extremely high temperature deep within Earth
c. mantle plumes
d. Intraplate volcanism

Diagram Questions Continue Below!!

Fig.1 
Evidence from Glaciation
Africa
India
South America
Antarctica
Australia

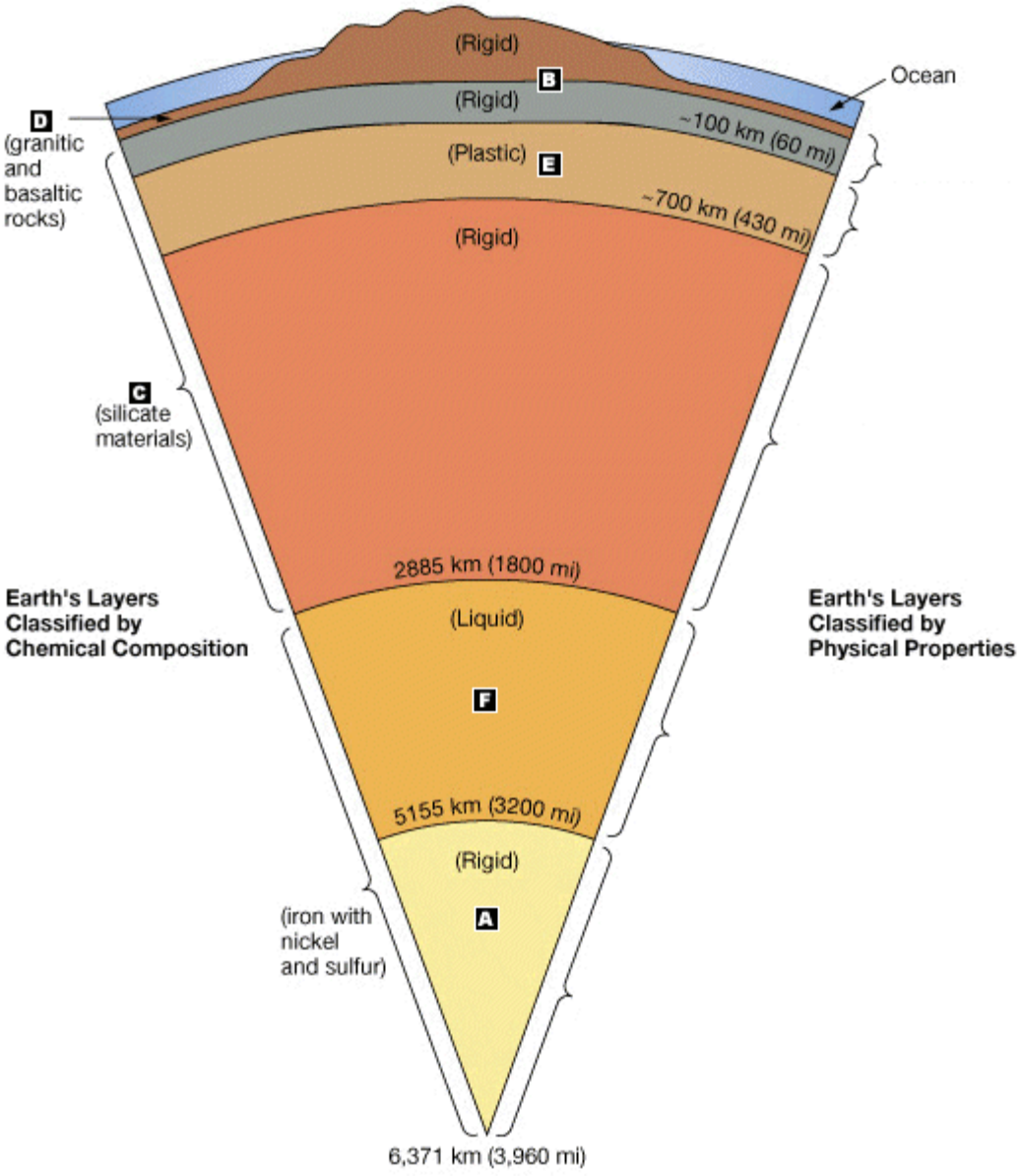

(Rigid)
B
(Rigid)
Ocean
~100 km (60 mi)
D
(granitic and basaltic rocks)
(Plastic)
E
~700 km (430 mi)
(Rigid)
C
(silicate materials)
2885 km (1800 mi)
Earth's Layers Classified by Chemical Composition
(Liquid)
Earth's Layers Classified by Physical Properties
F
5155 km (3200 mi)
(Rigid)
A
(iron with nickel and sulfur)
6,371 km (3,960 mi)

Fig. 2

Fig.3

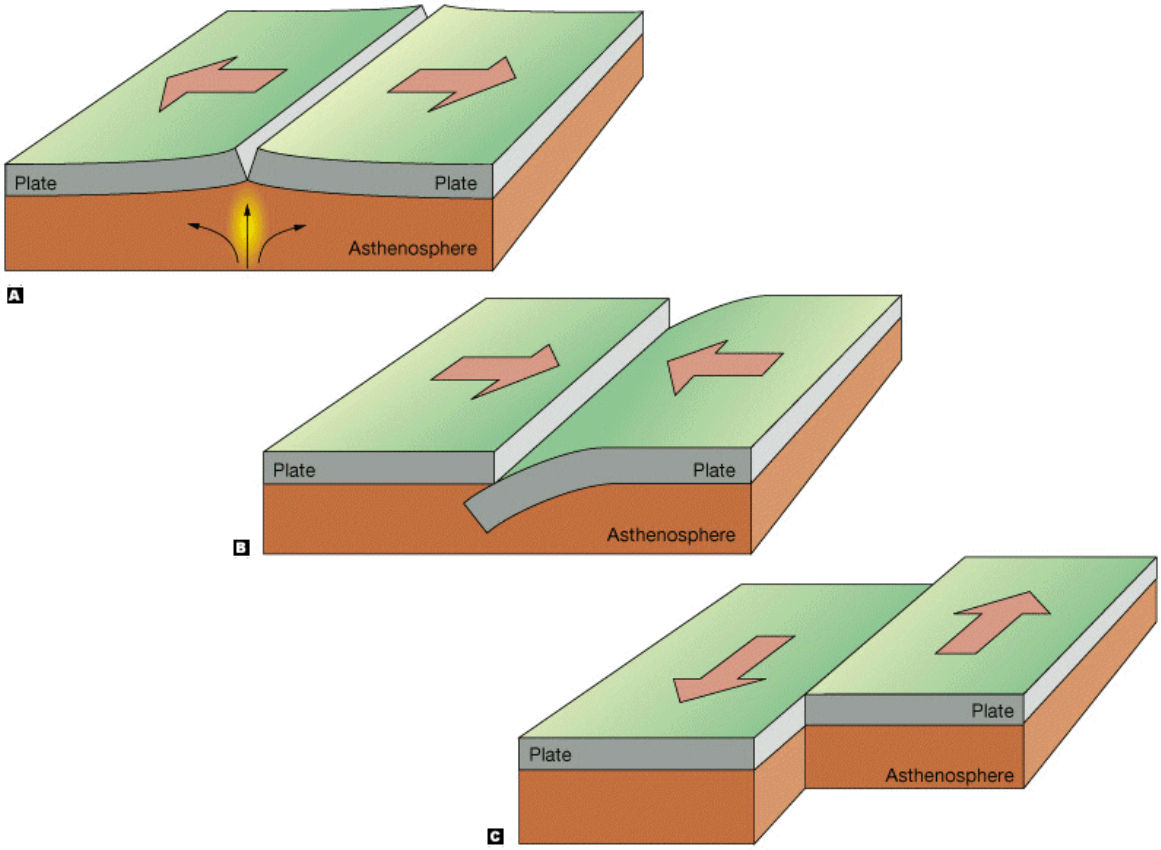
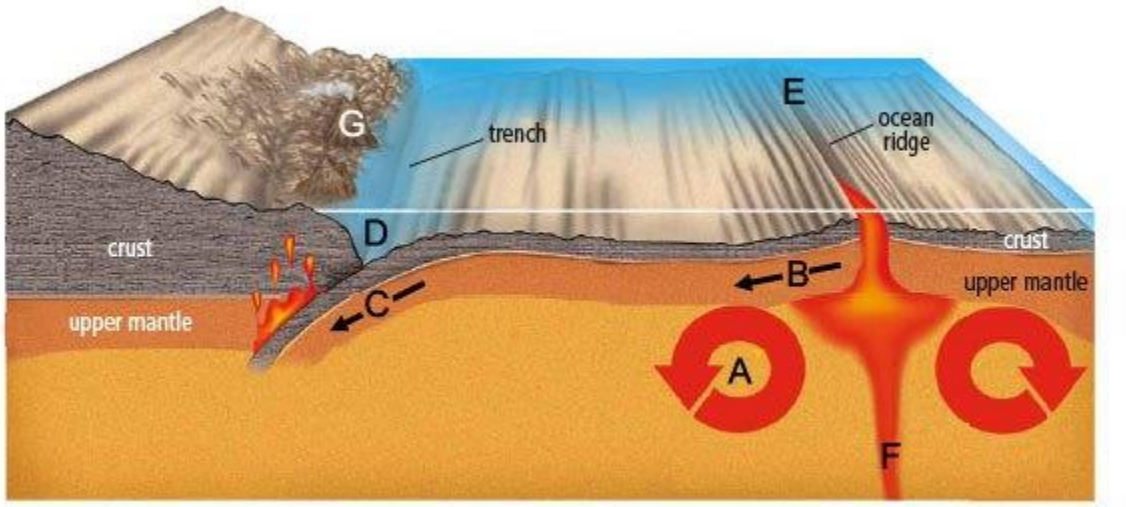


Plate
Plate
Asthenosphere
A
Plate
Plate
Asthenosphere
B
Plate
Plate
Asthenosphere
C

Fig. 4


G
trench
E
ocean
ridge
crust
D
crust
B
upper mantle
C
upper mantle
A
F